Start Date	Granting Agency	Project Title	Amount
		DEVELOPMENT OF A RAPID AND SENSITIVE METHOD FOR	
1/1/1995	National Livestock and Meat Board	QUANTIFICATION OF CALPASTATIN	\$4,532
		USE OF CALCIUM CHLORIDE MARINATION TO ENHANCE	
5/13/1996	National Livestock and Meat Board	CONSUMER ACCEPTANCE OF BEEF CUTS	\$10,000
8/22/1996	Ajinomoto Heartland Inc	LEAN SWINE NUTRIENT REQUIREMENTS UNDER STRESS	\$40,000
, .	•	MICROBIOLOGY OF RAW BEEF FROM CARCASSES	
		CONTAMIN ATED WITH PATHOGENS AFTER RECEIVING	
10/24/1996	National Livestock and Meat Board	INTERVENTIONS	\$47,200
		EFFECT OF SEVERAL STRATEGIES TO CONTROL VARIATION	
5/1/1007	National Cattlemen's Beef Assoc. (NCBA)	IN BEEF TENDERNESS ON CONSUMER SATISFACTION	\$50,000
3/1/1997	National Cathemen's been Assoc. (NCBA)	SEQUENCE OF TROPHECTODERM RNA EXPRESSION	730,000
0/1/1007	Iowa State University	THROUGHOUT PORCINE CONCEPTUS ELONGATION	\$18,000
3/1/133/	Towa State Othversity	CONSUMER EVALUATION OF BEEF CLASSIFIED FOR	710,000
1/1/1009	Fund for Rural America	TENDERNESS	\$400,000
1/1/1998	Tunu for Kurar America	DETERMINING THE VALUE OF TENDERNESS CLASSIFIED	, , , , , , , , , , , , , , , , , , ,
6/15/1009	National Cattlemen's Beef Assoc. (NCBA)	BEEF CUTS	\$26,044
0/13/1998	reactional Cattlemen's been Assoc. (NCDA)	DYNAMIC RESPONSES OF FEEDLOT CATTLE EXPOSED TO	720,044
10/1/1008	University of Nebraska	HEAT STRESS	\$73,355
	Colorado State University	CENTRAL U.S. NIGEC ASSESSMENT PROGRAM	\$69,600
10/1/1990	Colorado State Oniversity	CENTRAL 6.3. NIGLE ASSESSMENT I NOGRAM	405,000
		EVALUATE EFFECTS OF CYCLIC TEMPERATURE AND HEAT	
4/15/1999	Ajinomoto Heartland Inc	STRESS ON NUTRIENT REQUIREMENTS OF LEAN SWINE	\$50,000
		EFFICACY OF OBJECTIVE MEASUREMENTS OF TENDERNESS	
6/15/1999	National Cattlemen's Beef Assoc. (NCBA)	FOR PROVIDING GUARANTEED TENDER BEEF CUTS	\$49,500
	University of Nebraska	CENTRAL U.S. NIGEC ASSESSMENT PROGRAM	\$46,400
, _,	,	DETERMINING THE VALUE OF TENDERNESS CLASSIFIED	• •
11/17/1999	National Cattlemen's Beef Assoc. (NCBA)	BEEF CUTS	\$6,511
,,		GENETIC MECHANISMS FOR HOST CELL RESISTANCE TO	• •
3/1/2001	Department of Defense	VIRAL PATHOGENS	\$1,200,000
-, -,			- •

	DEVELOPMENT OF A METHOD FOR SHIPPING SAMPLES FOR	
	E COLI 0157, LISTERIA MONOCYTOGENES AND	
9/1/2001 National Cattlemen's Beef Assoc. (NCBA)	SALMONELLA	\$49,500
	FUNCTIONAL GENOMICS OF WELL-BEING AND MILK	
9/15/2001 Michigan State University	QUALITY IN CATTLE	\$97,475
4/1/2002 National Cattlemen's Beef Assoc. (NCBA)	ESCHERICIA COLI 0157 INDICATOR ORGANISM	\$59,500
	EFFICACY OF DE-HAIRING TO REDUCE E. COLI 0157:H7 IN	
4/1/2002 National Cattlemen's Beef Assoc. (NCBA)	COMMERCIAL BEEF PROCESSING PLANTS	\$81,500
	COMPARISON OF ANALYSIS FOR E. COLI 0157:H7 OF	
4/1/2002 National Cattlemen's Beef Assoc. (NCBA)	SAMPLES FROM COMMERCIAL BEEF PROCESSING PLANTS	\$106,000
•	REGIONAL VARIATION IN THE INCIDENCE OF E. COLI	
	O157:H7 ON THE HIDES AND CARCASSES OF FEEDLOT-	
4/1/2003 National Cattlemen's Beef Assoc. (NCBA)	FINISHED CATTLE	\$20,000
	DETERMINATION OF THE INCIDENCE OF E. COLI 0157:H7	
	AND SALMONELLA CONTAMINATION ON HIDES AND	
5/1/2003 National Cattlemen's Beef Assoc. (NCBA)	CARCASSES AT COW/BULL PACKING PLANTS	\$190,000
	STANDARDIZATION OF SLICE SHEAR FORCE	
·	MEASUREMENTS ACROSS RESEARCH INSTITUTIONS AND	
	EVALUATION OF REPEATABILITY OF SLICE SHEAR FORCE	
9/1/2003 National Cattlemen's Beef Assoc. (NCBA)	MEASUREM	\$9,200
	MAPPING THE MUSCLE FIBER ORIENTATION AND ADAPTING	
9/1/2003 National Cattlemen's Beef Assoc. (NCBA)	SLICE SHEAR FORCE FOR MAJOR BEEF MUSCLES	\$80,300
	PREDICTION OF BEEF CARCASS CUT-OUT YIELDS USING THE	
9/1/2003 National Cattlemen's Beef Assoc. (NCBA)	MARC BEEF IMAGE ANALYSIS SYSTEM	\$172,792
	MECHANISM OF THE EFFECTS OF GROWTH PROMOTANTS	
11/25/2003 Elanco Animal Health	ON MEAT TENDERNESS	\$125,400
1/1/2004 National Cattlemen's Beef Assoc. (NCBA)	ESCHERICHIA COLI 0157 INDICATOR ORGANISM	\$58,500
	PREVALENCE OF E. COLI 0157:H7 ON HIDES AND IN FECES	
4/1/2004 National Cattlemen's Beef Assoc. (NCBA)	OF FEEDLOT CATTLE OVER TIME	\$200,000

	ON-LINE CLASSIFICATION OF U.S. SELECT BEEF CARCASSES FOR LONGISSIMUS TENDERNESS USING NEAR-INFRARED	
5/1/2004 National Cattlemen's Beef Assoc. (NCBA)	REFLECTANCE SPECTROSCOPY EFFECTS OF E-BEAM IRRADIATION OF CHILLED BEEF	\$49,700
5/1/2004 American Meat Institute Foundation (AMIF)	CARCASSES ON MEAT SAFETY AND MEAT QUALITY MICROBIAL PROFILE OF IMPORTED RAW MATERIALS FOR	\$150,000
1/1/2005 National Cattlemen's Beef Assoc. (NCBA)	GROUND BEEF	\$75,000
	EFFECT OF STEAK LOCATION AND POSTMORTEM AGING	
5/1/2005 National Cattlemen's Beef Assoc. (NCBA)	TIME ON TOP SIRLOIN AND SHOULDER CLOD TENDERNESS	\$90,140
	METHOD DEVELOPMENT FOR ENUMERATION OF E. COLI	
	O157:H7 FOR GROUND BEEF AND HIDES, CARCASSES, AND	
5/1/2005 National Cattlemen's Beef Assoc. (NCBA)	FECES OF CATTLE	\$100,000
5/1/2005 National Cattlemen's Beef Assoc. (NCBA)	E. COLI 0157:H7 SURVIVAL ON CATTLE HIDES	\$80,000
	SEASONAL EFFECTS ON MULTI DRUG-RESISTANT	
	SALMONELLA SPP. AND LISTERIA MONOCYTOGENES	
6/1/2005 National Cattlemen's Beef Assoc. (NCBA)	PREVALENCE AT COW/BULL PROCESSING PLANTS	\$199,302
	DNA MARKERS FOR TRACEBACK, PARENTAGE, AND	
7/1/2005 American Sheep Industry Assn	IDENTIFICATION PURPOSES IN SHEEP	\$5,000
	EFFECTS OF POND ASH AS A FEEDLOT PEN SURFACE AND	
	ANIMAL STRESS-LEVEL ON THE PREVALENCE, LEVELS, AND	
5/1/2006 National Cattlemen's Beef Assoc. (NCBA)	(SEE REMARKS FOR FULL TITLE)	\$104,500
	EFFECT OF NEEDLE TENDERIZATION, AGING TIME AND	
	AGING TEMPERATURE ON POSTMORTEM PROTEOLYSIS	
5/1/2006 National Cattlemen's Beef Assoc. (NCBA)	AND TENDERNESS OF BEEF	\$45,750
	EFFECTS OF ANTIMICROBIAL INTERVENTIONS ON	
5/1/2006 National Cattlemen's Beef Assoc. (NCBA)	MULTIDRUG-RESISTANT (MDR) SALMONELLA	\$51,080
	EFFECTS OF PROCESSING PLANT LAIRAGE ON THE	
	PREVALENCE AND LOAD OF E. COLI 0157:H7 ON THE HIDES	
5/1/2006 National Cattlemen's Beef Assoc. (NCBA)	OF BEEF CATTLE	\$130,000
	REDUCTION OF SALMONELLA IN CATTLE FECES AND ON	
5/1/2006 National Cattlemen's Beef Assoc. (NCBA)	CATTLE HIDES	\$90,000

	PREVALENCE OF MYCOBACTERIUM AVIUM	
	PARATUBERCULOSIS IN LYMPH NODES & ON HIDES &	
	CARCASSES FROM CULL COW & FED CATTLE SLAUGHTER	•
11/1/2006 National Cattlemen's Beef Assoc. (NCBA)	PLANTS	\$90,000
	DETERMINATION OF THE PREVALENCE AND LEVEL OF	
	MULTI-DRUG RESISTANT (MDR) SALMONELLA IN CALF-FED	
12/1/2006 National Cattlemen's Beef Association	HOLSTEIN STEERS	\$19,950
	PREVALENCE OF CHARACTERIZATION OF NON-0157	
	EHEC/STEC ON PRE- AND POST-INTERVENTION CULL COW	
12/15/2006 National Cattlemen's Beef Assoc. (NCBA)	CARCASSES AND IN GROUND BEEF	\$50,000
	ENUMERATION OF SALMONELLA THROUGHOUT THE PORK	
5/1/2007 National Pork Board	HARVESTING PROCESS	\$37,600
	GENETIC VARIATION BETWEEN SHIGA-TOXIGENIC E. COLI	
	(STEC) O157 STRAINS OF HUMAN CLINICAL AND BEEF	
5/1/2007 National Cattlemen's Beef Assoc. (NCBA)	ORIGIN	\$100,000
	EVALUATION OF BEEF RECTUS FEMORIS STEAKS AS	
	SUBSTITUTIONS FOR BEEF TOP SIRLOIN STEAKS IN FOOD	
5/1/2007 National Cattlemen's Beef Assoc. (NCBA)	SERVICE APPLICATIONS	\$80,000
	EFFECTS ON ESCHERICHIA COLI 0157:H7 AND SALMONELLA	
	PREVALENCE AND LEVELS FROM FEEDING A DIRECT FED	
5/14/2007 Ivy Animal Health Inc.	MICROBIAL (DFM) TO FEEDLOT CATTLE	\$76,032
	SOURCE ATTRIBUTION OF ANTIBIOTIC RESISTANT	
5/14/2007 National Cattlemen's Beef Assoc. (NCBA)	SALMONELLA IN CATTLE PROCESSING PLANTS	
-,,,	SALMONELLA IN CATTLE PROCESSING PLANTS	\$159,710
_, _ ,, , _ , _ , _ , _ , _ , _ , _	COLONIZATION CHARACTERISTCS OF BOVINE RECTO-ANAL	\$159,710
6/1/2007 National Cattlemen's Beef Assoc. (NCBA)		\$159,710 \$79,144
	COLONIZATION CHARACTERISTCS OF BOVINE RECTO-ANAL	
	COLONIZATION CHARACTERISTCS OF BOVINE RECTO-ANAL JUNCTION TISSUE BY ESCHERICHIA COLI 0157:H7	
6/1/2007 National Cattlemen's Beef Assoc. (NCBA)	COLONIZATION CHARACTERISTCS OF BOVINE RECTO-ANAL JUNCTION TISSUE BY ESCHERICHIA COLI O157:H7 EFFECT OF DISTILLERS GRAINS ON CARCASS GRADE, RIBEYE	\$79,144
6/1/2007 National Cattlemen's Beef Assoc. (NCBA)	COLONIZATION CHARACTERISTCS OF BOVINE RECTO-ANAL JUNCTION TISSUE BY ESCHERICHIA COLI O157:H7 EFFECT OF DISTILLERS GRAINS ON CARCASS GRADE, RIBEYE TENDERNESS AND CARCASS VALUE	\$79,144
6/1/2007 National Cattlemen's Beef Assoc. (NCBA) 10/1/2007 Nebraska Corn Board	COLONIZATION CHARACTERISTCS OF BOVINE RECTO-ANAL JUNCTION TISSUE BY ESCHERICHIA COLI O157:H7 EFFECT OF DISTILLERS GRAINS ON CARCASS GRADE, RIBEYE TENDERNESS AND CARCASS VALUE EFFECT OF DISTILLERS GRAINS ON E. COLI O157:H7 IN	\$79,144 \$25,000
6/1/2007 National Cattlemen's Beef Assoc. (NCBA) 10/1/2007 Nebraska Corn Board	COLONIZATION CHARACTERISTCS OF BOVINE RECTO-ANAL JUNCTION TISSUE BY ESCHERICHIA COLI O157:H7 EFFECT OF DISTILLERS GRAINS ON CARCASS GRADE, RIBEYE TENDERNESS AND CARCASS VALUE EFFECT OF DISTILLERS GRAINS ON E. COLI O157:H7 IN FINISHING FEEDLOT CATTLE	\$79,144 \$25,000
6/1/2007 National Cattlemen's Beef Assoc. (NCBA) 10/1/2007 Nebraska Corn Board	COLONIZATION CHARACTERISTCS OF BOVINE RECTO-ANAL JUNCTION TISSUE BY ESCHERICHIA COLI O157:H7 EFFECT OF DISTILLERS GRAINS ON CARCASS GRADE, RIBEYE TENDERNESS AND CARCASS VALUE EFFECT OF DISTILLERS GRAINS ON E. COLI O157:H7 IN FINISHING FEEDLOT CATTLE HIDE TO CARCASS TRANSFER OF E. COLI O157:H7 AND	\$79,144 \$25,000

	COMPLETE GENOMIC SEQUENCE OF SIX SHIGA-TOXIGENIC	
3/1/2008 National Cattlemen's Beef Assoc. (NCBA)	E. COLI (STEC) NON-O157 STRAINS	\$100,000
	IDENTIFICATION OF QUANTITATIVE TRAIT NUCLEOTIDES	
5/1/2008 National Pork Board	(QTN) FOR PORK TENDERNESS	\$46,700
	STRATEGIES TO IMPROVE THE TENDERNESS OF VASTUS	
5/1/2008 National Cattlemen's Beef Assoc. (NCBA)	LATERALIS MUSCLES	\$56,500
	EVALUATION OF THE INTERACTION BETWEEN GENOTYPE	
	AND ADMINISTRATION OF AGGRESSIVE IMPLANT	
5/1/2008 National Cattlemen's Beef Assoc. (NCBA)	STRATEGIES ON BEEF TENDERNESS	\$66,000
	GENETIC MARKER ASSOCIATIONS WITH PORK PALATABILITY	
10/1/2008 Ohio State University	IN COMMERCIAL MARKET HOGS	\$15,000
	FINE-MAPPING AND POSITIONAL CANDIDATE GENE	
1/1/2009 University of Wisconsin	ANALYSIS OF TWINNING RATE QTL	\$3,000
	HEAT AND MOISTURE PRODUCTION RATES FOR MODERN	
4/1/2009 American Society of Heating, Refrigeration, & AC Eng	I SWINE AND THEIR HOUSING SYSTEMS	\$180,000
	EFFECT OF PREGNANT GILT ZINC AND LIPID	
	SUPPLEMENTATION ON NEONATAL PIGLET BRAIN	
5/1/2009 National Pork Board	MYELINATION AND PREWEANING MORTALITY	\$25,000
	BEYOND LONGISSIMUS: THE IMPACT ON OTHER MUSCLES	
	OF SORTING CARCASSES FOR TENDERNESS AND RETAIL	•
5/1/2009 National Cattlemen's Beef Assoc. (NCBA)	COLOR STABILITY WITH VISNIR SPECTROSCOPY	\$80,000
	GENE EXPRESSION RESPONSE OF SALMONELLA TO	
5/1/2009 National Cattlemen's Beef Assoc. (NCBA)	MULTIPLE HURDLE CARCASS PROCESSING INTERVENTIONS	\$65,000
	IDENTIFICATION OF SNP MARKERS ASSOCIATED WITH	
	WEANING TO ESTRUS INTERVAL IN COMMERCIAL FIRST	
5/1/2009 National Pork Board	PARITY SOWS	\$112,000
	DEVELOPMENT OF TECHNOLOGY FOR ACCURATE, RAPID	
12/1/2009 National Pork Board	PORK LOIN TENDERNESS PREDICTION	\$50,000
	DETERMINE IF REVALIDATION IS REQUIRED FOR CHANGES	
A lar lood on the local state of the control of the	IN SAMPLE SIZE OR MATRIX ON E. COLI 0157:H7	*
1/15/2010 National Cattlemen's Beef Assoc. (NCBA)	DETECTION TESTS	\$68,000

3/15/2010 American Meat Institute Foundation (AMIF)	EVALUATION OF COMMONLY USED ANTIMICROBIAL INTERVENTIONS ON SEROTYPES 026, 0103, 0111, AND 0145 NON-0157 SHIGA TOXIN PRODUCING E. COLI	\$22,576
·,···,····,		,,
	INTERACTION OF VISNIR PREDICTED TENDERNESS CLASS,	
	AGING TIME, AND BLADE TENDERIZATION ON SLICE SHEAR	
5/1/2010 National Cattlemen's Beef Assoc. (NCBA)	FORCE OF LONGISSIMUS AND GLUTEUS MEDIUS	\$60,007
	EFFICACY OF ANTIMICROBIAL INTERVENTIONS ON SHIGA	
	TOXIN-PRODUCING ESCHERICHIA COLI SEROTYPES 045,	
7/1/2010 American Meat Institute Foundation (AMIF)	0121, AND SALMONELLA INOCULATED FRESH MEAT	\$23,000
	INNOVATIVE BEEF TRIM SAMPLING TECHNIQUE TO	
•	IMPROVE THE ACCURACY OF DETECTING E. COLI 0157:H7	
8/1/2010 Nebraska Beef Council	AND OTHER STECS	\$40,000
	IDENTIFICATION AND CHARACTERIZATION OF	
	POPULATION(S) AT GREATEST RISK FOR THE PRESENCE OF	
10/1/2010 Texas Tech University	SALMONELLA WITHIN LYMPH NODES.	\$24,740
	EFFECTS OF SRP VACCINATION ON THE PREVALENCE AND	
	LOAD OF E. COLI 0157:H7 AND NON-0157 STEC ON THE	
10/1/2010 National Cattlemen's Beef Assoc. (NCBA)	HIDES OF BEEF CATTLE AT HARVEST	\$140,000
	EVALUATING THE EFFICACY INCLUSION OF BROMINE IN	
	DRINKING WATER ON THE PREVALENCE OF PATHOGEN	
10/1/2010 National Cattlemen's Beef Assoc. (NCBA)	SHIGA TOXIN PRODUCING E. COLI IN FEEDLOT CATTLE	\$30,000
	INVESTIGATION OF MOLECULAR TARGETS THAT IDENTIFY	
12/1/2010 National Cattlemen's Beef Assoc. (NCBA)	THE PRESENCE OF PATHOGENIC NON-0157 STEC	\$30,250
	E. COLI 0157:H7 IN BIOAEROSOLS FROM CATTLE	
	PRODUCTION AREAS: EVALUATION OF PROXIMITY &	
	AIRBORNE TRANSPORT ON LEAFY GREEN CROP	
1/1/2011 University of California, Davis	CONTAMINATION	\$296,360
	EFFECTS OF FREEZING, THAWING, AND AGING ON MEAT	
4/1/2011 King Saud University	TENDERNESS	\$35,000

	LONG POSTMORTEM AGING EFFECTS ON TENDERNESS,	
4/1/2011 National Cattlemen's Beef Assoc. (NCBA)	FLAVOR, LEAN COLOR, AND COLOR STABILITY OF BEEF TOP LOIN AND TOP SIRLOIN STEAKS	\$76 EEO
4/1/2011 National Cattlemen's Beel Assoc. (NCBA)	BASELINE STUDY OF E. COLI 0157:H7 PREVALENCE AND	\$76,550
5/1/2011 Elanco	LEVELS ON CATTLE HIDES AT PROCESSING	\$13,334
5) 1) 2 011 Eldiloo	SOLUTIONS FOR THE FOOD SAFETY THREAT POSED BY	Q20,00 I
	SALMONELLA IN THE LYMPH NODES OF CATTLE PRESENTED	
9/1/2011 Texas Tech University	FOR HARVEST	\$40,000
10/1/2011 Texas Agrilife Research	NATIONAL BEEF QUALITY AUDIT 2011	\$15,000
	DETERMINING OPTIMAL SANITIZER EFFECTIVENESS	
	AGAINST PATHOGENIC BACTERIAL BIOFILM COMMONLY	
10/1/2011 Nebraska Beef Council	FOUND ON MEAT PROCESSING EQUIPMENT SURFACES	\$35,000
	CHARACTERIZATION OF E. COLI 0157:H7 STRAINS	
11/1/2011 National Cattlemen's Beef Assoc. (NCBA)	ASSOCIATED WITH SUPER-SHEDDING CATTLE	\$45,000
	DISCOVERY OF MOLECULAR TARGETS FOR IDENTIFYING THE	
	TOP SIX HUMAN DISEASE-CAUSING SHIGA-TOXIGENIC E.	
11/1/2011 National Cattlemen's Beef Assoc. (NCBA)	COLI NON-O157 STRAINS	\$100,000
	CHARACTERIZATION OF SALMONELLA GENE EXPRESSION	
	PROFILES WHEN PRESENT IN CATTLE SUBILIAC LYMPH	
11/1/2011 National Cattlemen's Beef Assoc. (NCBA)	NODESPROOF OF CONCEPT	\$35,000
	IDENTIFICATION OF BOVINE RESERVOIRS OF HUMAN	
2/1/2012 American Meat Institute Foundation (AMIF)	PATHOGENIC NON-0157 SHIGA TOXIN-PRODUCING E. COLI	\$80,000
	EFFECT OF LYSOZYME OR ANTIBIOTICS IN AMELIORATING	
10/1/2012 National Pork Board	THE EFFECTS OF AN INDIRECT DISEASE CHALLENGE	\$69,964
	EXAMINATION OF POTENTIAL ENVIRONMENTAL	
	PREDICTORS OF SALMONELLA CONTAMINATION IN	
10/1/2012 National Cattlemen's Beef Assoc. (NCBA)	FEEDLOT ENVIRONMENTS	\$60,000
	Validation of environmental predictors of Salmonella	
12/1/2012 National Cattlemen's Beef Assoc. (NCBA)	contamination in feedlot environments	\$30,000
12/15/2012 National Pork Board	Dietary effects on sow productivity to three parities	\$1,028,496

12/15/2012 National Pork Board	OPTIMAL DIETARY ENERGY AND PROTEIN FOR THE DEVELOPMENT OF GILTS	\$353,150
3/1/2013 King Saud University	Methods for understanding variation in beef tenderness Reference Data Resource Creation: Genomic and	\$40,000
5/1/2013 North American Meat Association (NAMA)	Phenotypic Characterization of Salmonella enterica Serotypes for Examining Salmonella Virulence	\$166,000
6/15/2013 National Cattlemen's Beef Association	Antibiotic Resistance by Source: Human-cattle-swine Characterization of a novel translational model for Becker	\$20,480
8/1/2013 Iowa State University	muscular dystrophy Epidemiology of Mannheimia haemolytica in Comingled	\$33,000
8/15/2013 Kansas State University	Feedlot Cattle Prevalence and Enumeration of Antimicrobial Resistant Escherichia coli and Salmonella Throughout the Beef	\$75,000
10/1/2013 Nebraska Beef Council	Production Continuum	\$52,222
2/1/2014 American Meat Institute Foundation (AMIF)	Hide-on Carcass Wash System with Thermal/Chemical Dehairing and Mechanical Scraping	\$40,000
2/1/2014 American weat institute roundation (Alvir)	Denaiting and Mechanical Scraping	\$40,000